DOCUMENT RESUME

ED 326 547 TM 015 803

AUTHOR Sexton, David; And Others
TITLE Measurement Integrity of the Family Needs Survey.
PUB DATE 9 Nov 90
NOTE 19p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (19th, New Orleans, LA, November 14-16, 1990).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Disabilities; Early Intervention; *Factor Structure; *Family Problems; *Mothers; *Parent Attitudes; Surveys; *Test Validity; Young Children
IDENTIFIERS *Family Needs Survey; Parent Surveys

ABSTRACT

The 35-item Family Needs Survey (FNS) is purported both to facilitate the acquisition of the parent's perspective on needs of families with handicapped children and to possess prescriptive utility. The FNS directs parents to indicate if they definitely do have a need, definitely do not have a need, or are uncertain if they have a need in six different categories of needs: information, support, explaining to others, community services, financial, and family functioning. In this study, the measurement integrity of data collected using the FNS was investigated. Data provided by 53 mothers of young handicapped children were subjected to both classical test theory analyses and factor analysis. Subjects' mean age was 30 years; their children ranged in age from 4 to 64 months, with a mean age of 36 months. According to generic classifications, 38 (71.7%) of the children had mild/moderate handicaps, while 12 (22.6%) had severe/profound handicaps. Types of handicaps reported included developmental disabilities, mental retardation, cerebral palsy, spina bifida, and others. The areas that the mothers considered "definite" needs were also compared with those of similar analyses conducted in a previous study. Results suggest that the FNS is a reasonably valid measure of family needs. The instrument can be used to facilitate the development of individualized family service plans for infants and toddlers and the formulation of school and community workshops or programs for parents of young children with handicaps. Three data tables and one graph are included. (TJH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

msera.fns 11/9/90

ED326547

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

BRUCE THOMPSON

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

MEASUREMENT INTEGRITY OF THE FAMILY NEEDS SURVEY

David Sexton, Ph.D.
University of New Orleans
New Orleans, LA 70148

Brenda Burrell, Ph.D.
University of New Orleans
New Orleans, LA 70148

Bruce Thompson, Ed.D.
Texas A&M University
College Station, TX 77843-4225

Paper presented at the annual meeting of the Mid-South Educational Research Association, New Orleans, LA, November 14, 1990.

TM015903

ABSTRACT

The present study investigated the measurement integrity of data collected using the Family Needs Survey (FNS). The data provided by 53 mothers of children with handicaps were subject to both classical test theory analyses and to factor analysis. The areas that the mothers considered "definite" needs were also compared with similar analyses conducted in a previous study. Results suggest that the FNS is a reasonably valid measure of family needs.

The current trend in early childhood special education is to provide services for infants and toddlers within the context of the family (Bailey, 1988). This is perhaps a result of mounting recognition that the family is the most influential of all the social groups that shape behavior, and of increasing regard for the systemic nature of family dynamics involving complex interactions (Robinson, Rosenberg, & Beckman, 1988; Turnbull, Summers, & Brotherson, 1984; Vogel & Bell, 1968; Weissbourd, 1988). Families of infants and toddlers with handicaps may be particularly affected by the unexpected demands and adjustments required in families experiencing the arrival of a child with exceptionalities (Huntington, 1988). As resources are depleted and new problems or developmental difficulties emerge, needs are created. Dunst, Trivette, and Deal (1988, p. 13, emphasis in original) define a need as "an individual's judgement of the discrepancy between actual states or conditions and what is normative, desired, or valued **from a help seeker's . . . perspective.**"

The Education of the Handicapped Act Amendments of 1986 (Public Law 99-457) acknowledge the need to enrich the competencies of families for the benefit of infants and toddlers (0-3 years old) with handicaps. PL 99-457 conceptualizes early intervention as including a variety of services that may be rendered singly or in combination, depending on the unique needs of the individual infant or toddler and the toddler's family. Public Law 99-457 mandates the collaborative development of

individualized family service plans (IFSPs) by parents and professionals. IFSPs are to include a statement of the family's needs related to enhancing the development of the infant or toddler. Specific early intervention services necessary to meet the unique needs of the infant or toddler and the family must also be included (Garwood & Sheehan, 1989). Thus, it is incumbent upon special educators to identify instruments that both assess family needs (from the benefactor's perspective) and provide practical implications for early intervention. Furthermore, it is imperative for special educators to employ assessment instruments that yield data with measurement integrity. Selected instruments should have a record of consistently yielding data that are reliable and valid.

The Family Needs Survey (FNS) is purported both to facilitate the acquisition of the parent perspective on family needs and to possess prescriptive utility (Bailey & Simeonsson, 1988). However, empirical evidence regarding the psychometric properties of the instrument is limited. Bailey and his colleagues have reported factor analytic and test-retest reliability results for the measure (Bailey, Blasco, & Simeonsson, 1990; Bailey & Simeonsson, 1988). Additional factor analyses are needed in the interest of accumulating a body of evidence regarding the measure's structure. Furthermore, additional evidence of internal consistency reliability would be useful to help characterize the measure.

Consequently, the purpose of the present study was to

examine the measurement integrity of data collected using FNS. The needs expressed by the mothers were also examined, and were compared with related findings reported by Bailey and Simeonsson (1988).

Method

Subjects

The subjects were 53 mothers of young children with handicaps. The mean age of the mothers was 30 years. The children ranged in age from 4 to 64 months, with a mean age of 36 months. According to generic classifications, 38 of the children (71.7%) had mild/moderate handicaps while 12 (22.6%) had severe/profound handicaps. The types of handicaps reported included developmental disabilities, mental retardation, cerebral palsy, spina bifida, and others.

Procedure

Mothers were asked to complete the Family Needs Survey (FNS), a 35-item instrument Bailey and Simeonsson (1988) designed to identify the functional needs of families of young children with handicaps. The survey directs parents to indicate if they definitely do have a need, definitely do not have a need, or are uncertain if they have a need in six different categories of needs: (a) information, (b) support, (c) explaining to others, (d) community services, (e) financial, and (f) family functioning.

Results

Measurement Integrity

Reliability. The developers of the instrument, Bailey and Simeonsson (1988), only reported test-retest reliability (FNS total=.67) over a 6 month period. In the present study, coefficient alpha was computed as a lower bound estimate of internal consistency reliability. The alpha coefficient for the FNS total score ($\underline{y}$=35) was .91. Alpha coefficients for the six subscales ranged from .65 to .86. The alpha coefficients for Explaining to Others, Information, and Financial needs, were .86, .81, and .80, respectively. Family Functioning, Support, and Community subscale alphas were .79, .73, and .65, respectively. Thus, data collected in the present study using the FNS may be generally characterized as reliable, given that the estimates of the internal consistency reliability of FNS total and the FNS subscale scores are high or at least moderate. Table 1 presents item discrimination, alpha-if-deleted, and alpha coefficients for each item of the FNS, each subscale, and the total FNS.

INSERT TABLE 1 ABOUT HERE.

Validity. Bailey and Simeonsson (1988) originally identified six different subscales for the FNS that were based on presumptions regarding structure. Later the FNS was subjected to principal factors analysis followed by varimax rotation. This analysis resulted in the identification of five factors underlying the responses of parents of children with handicaps (Bailey, Blasco, & Simeonsson, 1990).

Figure 1 presents the "scree" plot of the first nine

eigenvalues of the correlation matrix in the present study. The plot suggests the existence of five or six factors. Since the eigenvalue of the sixth component (1.38) prior to rotation was greater than one, and since the sixth factor in the rotated solution had at least four salient items, the sixth factor was retained in the present study. Table 2 presents the items that correlated greater than |.30| with each of the six varimax-rotated principal components identified in the present study.

INSERT FIGURE 1 AND TABLE 2 ABOUT HERE.

In interpreting factor structure coefficients, it is important to keep in mind that these correlation coefficients, reflecting association between item scores and scores on the latent factors, must be squared before they can be compared with each other. Thus, a variable with a structure coefficient of .71 ($.71^2$ = 50.4%) on a given factor is more than twice as useful at measuring the latent factor construct than is an item with a structure coefficient on the factor of .50 ($.50^2$ = 25.0%).

Factor I included items dealing with External Interaction, especially in explaining the child's condition. Factor II included items focusing on a perceived need for greater Expertise. Factor III included items associated with meeting Care needs for the child with handicapping conditions. Factor IV included items involving Instructional needs (e.g., helping the child grow and develop). Factor V included items involving Financial/Counseling needs. Factor VI primarily included items

involving Service needs (e.g., locating a dentist for the child). Thus, a generally meaningful structure emerged in the present study, notwithstanding the unfavorable subject-to-item ratio of 53-to-35.

The structure that emerged in the current study appears grounded in categories of resources needed as against categories involving the circumstances in which the resources are applied. It remains to be seen whether similar patterns emerge in future studies with more subjects or with more diverse subject types.

Substantive Analyses

Items involving the need for information were most frequently identified as "definite" needs by the mothers of young children with handicaps. Mothers were particularly concerned about future (76%) and present (68%) services for their children, information about teaching their children (62%), and information regarding their child's condition or disability (51%).

The need for social support was also an area of "definite" concern. Opportunities to read about (47%) or talk with (45%) other parents of children with handicaps were most desired. Financial needs, help with explaining their child's condition or disability to others, and community services were also areas in which a large percentage of parents expressed "definite" needs.

Mothers appeared to be less desirous of help in the area of family functioning. The mean subscale scores were: (a) Information, 15.5 (7 items, maximum score = 21); (b) Support, 14.6 (8 items, maximum score = 24); (c) Financial, 9.9 (6 items,

maximum score = 18); (d) Explaining to Others, 8.0 (5 items, maximum score = 15); (e) Community Services, 7.9 (5 items, maximum score = 15); and (f) Family Functioning, 5.7 (4 items, maximum score = 12).

Table 3 compares the results in the present study with the results for mothers in the study reported by Bailey and Simeonsson (1988). In both studies, the need for information (e.g., future services for child) and the need for social support (e.g., reading about parents with similar children) were the strongest felt needs.

INSERT TABLE 3 ABOUT HERE.

Discussion

Results of the alpha calculations and the factor analysis indicate that scores ascertained with the use of the FNS appear to possess reasonable measurement integrity. The data in hand were reasonably reliable and valid. Consequently, results of substantive analyses employing the FNS can be afforded considerable credence and early interventionists can consider the needs most frequently identified as indicators of service needs. However, while the results of the substantive analyses may be helpful in devising broad-based programs, they should not be generally applied in the formulation of generic solutions for every parent.

The emphasis in Public Law 99-457 is (as it should be) on unique and individual needs. It is critical that needs be

assessed for every parent. Thus, the most important outcome of the current study is the support for the use of the FNS. Early interventionists may be well advised to employ the FNS as one measure of family needs. The instrument can be used to facilitate the development of individualized family service plans for infants and toddlers and the formulation of school and community workshops or programs for parents of young children with handicaps.

References

Bailey, D. B., Blasco, P. M, & Simeonsson, R. J. (1990). The structure and nature of family needs in early intervention. Manuscript submitted for publication.

Bailey, D. B., & Simeonsson, R. J. (1988). Assessing needs of families with handicapped infants. Journal of Special Education, 22, 117-127.

Dunst, C. J., Trivette, C. M., & Deal, A. G. (1988). Enabling and empowering families. Cambridge, MA: Brookline.

Garwood, S. G., & Sheehan, R. (1989). Designing a comprehensive early intervention system. Austin, TX: Pro Ed.

Huntington, G. S. (1988). Assessing child characteristics that influence family functioning. In D. B. Bailey & R. J. Simeonsson (Eds.), Family assessment in early intervention (pp. 45-64). Columbus, OH: Merrill.

Robinson, C. C., Rosenberg, S. A., & Beckman, P. J. (1988). Parent involvement in early childhood special education. In J. Jordon, J. Gallagher, & M. Karnes (Eds.), Early childhood special education: Birth to three (pp. 110-127). Reston, VA: Council for Exceptional Children.

Turnbull, A. P., Summers, J. A., & Brotherson, M. J. (1984). Working with families with disabled members: A family systems approach. Unpublished manuscript, University of Kansas, The Research and Training Center on Independent Living, Lawrence, KS.

Vogel, E. F., & Bell, N. W. (1968). The emotionally disturbed

child as the family scapegoat. In N. W. Bell, & E. F. Vogel (Eds.), A modern introduction to the family (rev. ed., pp. 412-427). New York: Free Press.

Weissbourd, B. (1988). The maturing family support movement: Shaping practice and policy for the '90s. Family Resource Coalition Report, No. 3, 2-3.

Table 1
Item Discrimination, Alpha-if-Deleted, and Alpha Coefficients for the FNS
(n=53)

Item	Corr Disc	alpha Del [a]	alpha	Corr Disc [b]	alpha Del	alpha
INFORMATION				TOTAL		
1	0.65	0.77		0.65	0.90	
2	0.55	0.79		0.53	0.90	
3	0.70	0.77		0.42	0.90	
4	0.51	0.80		0.39	0.91	
5	0.50	0.80		0.43	0.90	
6	0.51	0.80		0.35	0.91	
7	0.48	0.80	0.81	0.42	0.90	
SUPPORT						
8	0.56	0.67		0.67	0.90	
9	0.50	0.68		0.41	0.90	
10	0.43	0.70		0.45	0.90	
11	0.46	0.69		0.49	0.90	
12	0.59	0.66		0.56	0.90	
13	0.49	0.69		0.56	0.90	
14	0.31	0.72		0.32	0.91	
15	0.07	0.76	0.73	0.23	0.91	
EXPLAINING TO OTHERS						
16	0.73	0.81		0.60	0.90	
17	0.53	0.86		0.48	0.90	
18	0.62	0.84		0.50	0.90	
19	0.78	0.80		0.70	0.90	
20	0.72	0.81	0.86	0.66	0.90	
COMMUNITY SERVICES						
21	0.42	0.59		0.46	0.90	
22	0.48	0.56		0.45	0.90	
23	0.39	0.61		0.25	0.91	
24	0.41	0.60		0.30	0.91	
25	0.34	0.63	0.65	0.24	0.91	
FINANCIAL						
26	0.69	0.73		0.43	0.90	
27	0.51	0.77		0.09	0.91	
28	0.50	0.78		0.32	0.91	
29	0.47	0.78		0.38	0.91	
30	0.58	0.76		0.38	0.91	
31	0.57	0.76	0.80	0.41	0.90	
FAMILY FUNCTIONING						
32	0.68	0.69		0.61	0.90	
33	0.61	0.73		0.55	0.90	
34	0.55	0.77		0.46	0.90	
35	0.58	0.75	0.79	0.47	0.90	

[a]Corrected item discrimination, alpha-if-delete item, and alpha coefficients for subscales.
[b]Corrected item discrimination, alpha-if-delete item, and alpha coefficients for the total scale.

Table 2
Salient FNS Items for Varimax-Rotated Principal Components
(n=53; y=35)

Exp	Str	No.	Item
F	.73	35	Our family needs help in deciding on and doing recreational activities.
E	.72	19	I need help in knowing how to respond when friends, neighbors, or strangers ask questions about my child's condition.
E	.68	16	I need more help in how to explain my child's condition to his/her siblings.
E	.63	20	I need help in explaining my child's condition to other children.
F	.63	32	Our family needs help in discussing problems and reaching solutions.
E	.61	18	My spouse needs help in understanding and accepting this child's condition.
E	.61	17	I need more help in explaining my child's condition to either my parents or my spouse's parents.
F	.50	33	Our family needs help in learning how to support each other during difficult times.
C	.49	21	I need help locating a doctor who understands me and my child's needs.
F	.47	34	Our family needs help in deciding who will do household chores, child care, and other family tasks.
S	.47	10	I need to have more opportunities to meet and talk with other parents of handicapped children.
S	.41	13	I need to talk more to a minister who could help me deal with problems.
C	.40	25	I need help in getting appropriate care for my child in our church or synagogue nursery during church services.
S	.35	12	I would like to meet more regularly with a counselor (psychologist, social worker, psychiatrist) to talk about problems.
S	.31	11	I need to have more time just to talk with my child's teacher or therapist.
			Factor II
I	.82	5	I need more information on the services that are presently available for my child.
I	.82	6	I need more information about the services that my child might receive in the future.
S	.68	14	I need reading material about other parents who have a child similar to mine.
S	.55	12	I would like to meet more regularly with a counselor (psychologist, social worker, psychiatrist) to talk about problems.
S	.52	10	I need to have more opportunities to meet and talk with other parents of handicapped children.
I	.51	1	I need more information about my child's condition or disability.
S	.37	11	I need to have more time just to talk with my

			child's teacher or therapist.
I	.31	3	I need more information about how to teach my child.
			Factor III
M	.82	30	I need more help paying for babysitting or respite care.
C	.72	24	I need help locating a day care center or preschool for my child.
C	.64	23	I need help locating babysitters or respite care providers who are willing and able to care for my child.
M	.63	27	I need more help in getting special equipment for my child's needs.
M	.57	28	I need more help in paying for therapy, day care, or other services my child needs.
M	.50	26	I need more help in paying for expenses such as food, housing, medical care.
C	.50	25	I need help in getting appropriate care for my child in our church or synagogue nursery during church services.
M	.42	31	I need more help paying for toys that my child needs.
			Factor IV
I	.73	7	I need more information about how children grow and develop.
I	.66	3	I need more information about how to teach my child.
I	.65	4	I need more information on how to play with or talk to my child.
I	.57	2	I need more information about how to handle my child's behavior.
E	.58	20	I need help in explaining my child's condition to other children.
S	.51	11	I need to have more time just to talk with my child's teacher or therapist.
F	.40	33	Our family needs help in learning how to support each other during difficult times.
I	.37	1	I need more information about my child's condition or disability.
E	.35	19	I need help in knowing how to respond when friends, neighbors, or strangers ask questions about my child's condition.
S	.33	9	I need to have more friends that I can talk to.
F	.31	32	Our family needs help in discussing problems and reaching solutions.
			Factor V
M	.69	31	I need more help paying for toys that my child needs.
S	.68	13	I need to talk more to a minister who could help me deal with problems.
M	.62	26	I need more help in paying for expenses such as food, housing, medical care.
M	.60	29	I or my spouse need more counseling or help in getting a job.
S	.52	8	I need to have someone in my family that I can

			talk to more about problems.
S	.52	9	I need to have more friends that I can talk to.
I	.44	2	I need more information about how to handle my child's behavior.
S	.41	12	I would like to meet more regularly with a counselor (psychologist, social worker, psychiatrist) to talk about problems.
F	.31	32	Our family needs help in discussing problems and reaching solutions.
			Factor VI
C	.79	22	I need help locating a dentist who will see my child.
C	.60	21	I need help locating a doctor who understands me and my child's needs.
I	.48	1	I need more information about my child's condition or disability.
S	.43	15	I need to have more time for myself.
I	.38	3	I need more information about how to teach my child.
S	.34	8	I need to have someone in my family that I can talk to more about problems.
E	.33	16	I need more help in how to explain my child's condition to his/her siblings.
S	.30	9	I need to have more friends that I can talk to.

Note. "Exp" = the subscale to which items were assigned by Bailey and Simeonsson (1988). The expected ("Exp") factors were coded: "I" = "Information"; "S" = "(Social) Support"; "E" = "Explaining to Others"; "C" = "Community Services"; "F" = "Family Functioning"; and "M" = "Financial (Money)". "Str" = the factor structure coefficient for the item. "No." = the item number for each scored item. Weighted item responses were the basis for factor extraction.

Table 3
Percentage of Parents Answering "Definitely a Need"

Item Number	Item Nucleus	Bailey & Simeonsson	Current Study
01	CHILD'S CONDITION OR DISABILITY	53%	51%
02	HOW TO HANDLE CHILD'S BEHAVIOR	41%	34%
03	HOW TO TEACH MY CHILD	65%	62%
04	HOW TO PLAY OR TALK WITH MY CHILD	32%	30%
05	SERVICES PRESENTLY AVAILABLE	56%	68%
06	SERVICES MIGHT RECEIVE IN FUTURE	77%	76%
07	HOW CHILDREN GROW AND DEVELOP	41%	38%
08	FAMILY TO TALK TO ABOUT PROBLEMS	29%	13%
09	MORE FRIENDS I CAN TALK TO	32%	13%
10	PARENTS OF CHILDREN W/HANDICAPS	62%	45%
11	TALK WITH TEACHER OR THERAPIST	06%	34%
12	MEET REGULARLY WITH COUNSELOR	15%	26%
13	TALK W/MINISTER WHO HELP W/PROB	12%	11%
14	READINGS ABT PARENTS W/SIMILAR CHD	74%	47%
15	MORE TIME FOR MYSELF	59%	23%
16	CHILD'S SIBLINGS	27%	28%
17	MY PARENTS OR MY SPOUSE'S PARENTS	12%	19%
18	SPOUSE - UNDERSTANDING & ACCEPTING	21%	11%
19	FRIENDS, NEIGHBORS, AND STRANGERS	44%	32%
20	OTHER CHILDREN	47%	28%
21	DOCTOR WHO UNDERSTANDS ME & CHILD	06%	19%
22	DENTIST WHO WILL SEE MY CHILD	12%	19%
23	BABYSITTERS OR RESPITE CARE	40%	30%
24	DAYCARE CENTER OR PRESCHOOL	27%	19%
25	NURSERY DURING CHURCH SERVICES	06%	19%
26	FOOD, HOUSING, MEDICAL CARE	50%	38%
27	SPECIAL EQUIPMENT	21%	19%
28	THERAPY, DAYCARE, & OTHER SERVICES	21%	36%
29	I OR SPOUSE - HELP IN GETTING JOB	09%	17%
30	BABYSITTING OR RESPITE CARE	18%	24%
31	TOYS MY CHILD NEEDS	18%	17%
32	DISCUSSING PROBLEMS & SOLUTIONS	35%	13%
33	SUPPORT DURING DIFFICULT TIMES	44%	17%
34	DECIDING WHO DO CHORES & CHILDCARE	18%	04%
35	DECIDING ON & DOING RECREATION	38%	08%

Note. The results from Bailey and Simeonsson (1988) reported here were for mothers only. The subscales consist of: (a) Need for Information, items 1 to 7; (b) Need for Support, items 8 to 15; (c) Explaining to Others, items 16 to 20; (d) Community Services, items 21 to 25; (e) Financial Needs, items 26 to 31; (f) Family Functioning, items 32 to 35.

Figure 1
Scree Plot for the FNS
(n=53; v=35)